

# Healthcare Volatility Wreaks Havoc on Predicting Risk and Managing Costs

*Achieving high precision and speed-to-insight with a data-driven strategy*

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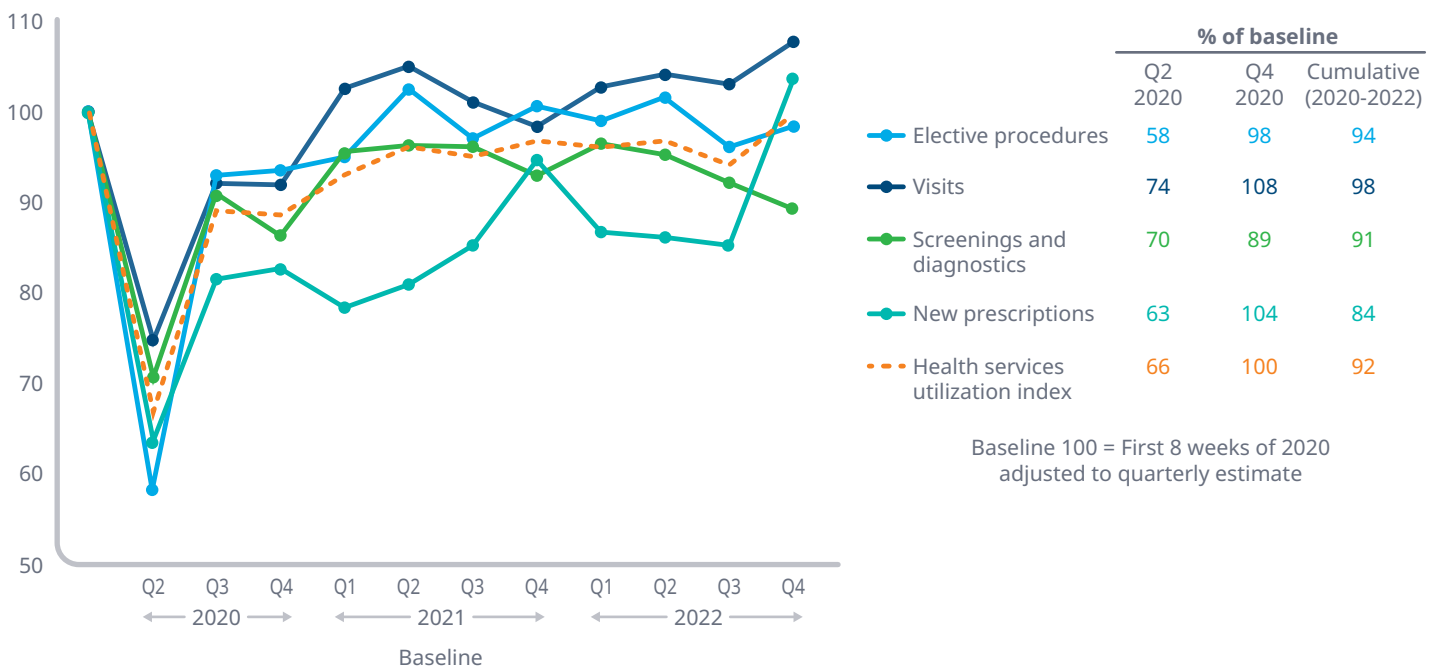
Current healthcare volatility stems from multiple inflection points. The population risk from COVID-19 is lasting longer than expected, including the impact of “long COVID.” Even after the pandemic has been declared to be over, there is continued impact on overall health and wellness trends, health system interactions, healthcare costs and access, life expectancy, regulatory and policy elements, and the design of benefits. In this volatile environment, keeping costs to a minimum while providing competitive, high-quality benefit solutions is a challenge faced by healthcare and life insurers, self-funded plans, employee benefit consultants, payers, stop loss/reinsurance, and InsurTech vendors alike.

## Factors impacting risk prediction

Utilization of health services reached 100% of pre-pandemic levels for the first time at the end of 2022.<sup>1</sup> However, how and where consumers interact with the healthcare system has changed, and still to be addressed are the implications from missed preventive and treatment services and avoided interactions due to benefit coverage and economic shifts.

Healthcare entities and consumers are also dealing with the impact of new, high-cost medical approaches such as cell, gene, and RNA therapies (CAGT; *Figure 2*). While CAGT are promising, their potential financial

**Figure 1: Health Services Utilization Index and component metrics percentage of 2020 baseline**



impact is daunting — and questions remain about the longer-term balance of cost versus efficacy and how that cost is shared through innovative contracting. A full understanding of this pipeline can help companies predict the impact of these products.

In addition, artificial intelligence and machine learning (AI/ML) technologies are maturing, with a choice of many vendors. Health plans, insurers, and providers have been slow to implement these technologies, and many remain unsure of how to harness their potential.

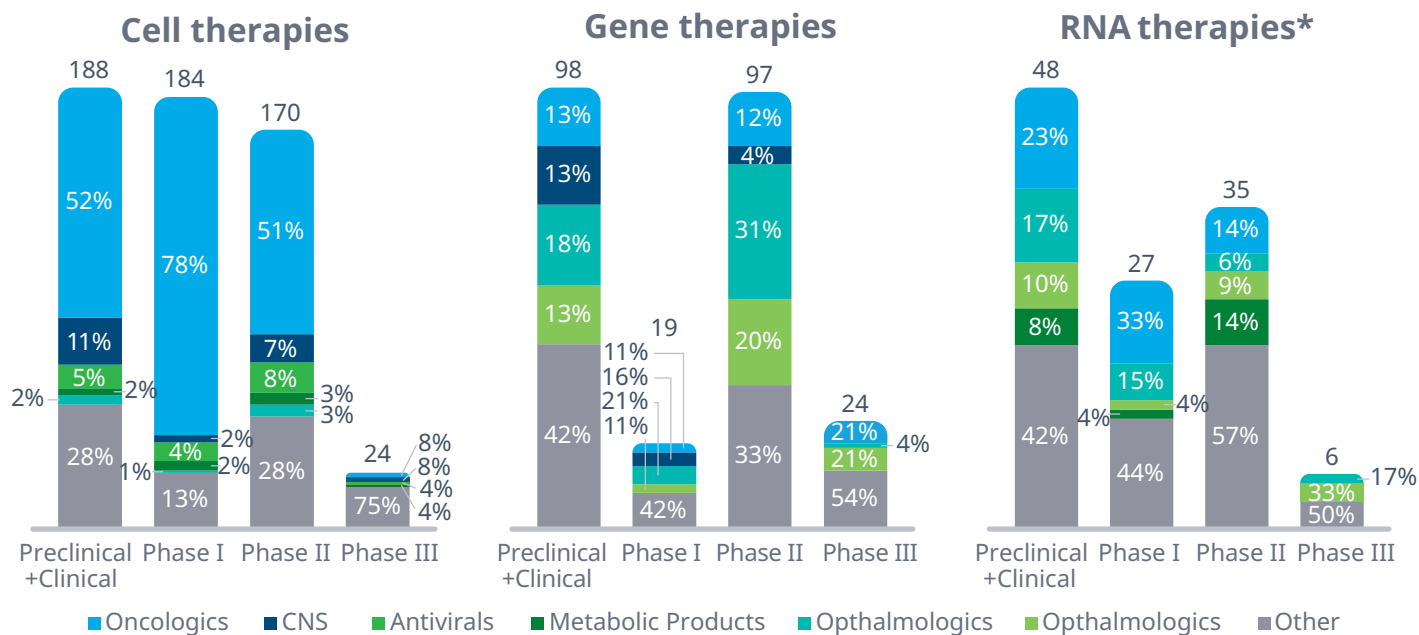
## New approaches to assessing risk to drive price, strategy, and reimbursement

Traditional models used to predict risk across a myriad of healthcare use cases (from underwriting, to laser, to care management use cases) have historically worked well in a more stable environment, and required only minor finessing over time to create a competitive edge, improve margins, and drive growth. Healthcare volatility

has shaken up this steady state and risk-bearing entities have begun to transition towards more advanced predictive analytics and the use of external data assets to gain much needed precision in pricing to manage costs and drive new business. Consumers are engaging with healthcare systems and services differently and the delivery of healthcare and novel treatments is increasingly more personalized. Including this market data in AI/ML models is essential to understand patient populations and anticipate their needs.

Many companies who are challenged to find the bandwidth and resources needed to benefit from predictive analytics will seek a partner to provide the precision and speed-to-insight that are essential elements in this evolving market. By delivering the right data, right processes, and right actions, a proven partner can provide access to these benefits. Advanced analytics enables companies to gain accuracy in predicting future costs and utilization, improve the precision of their pricing to limit loss ratios, and to differentiate themselves from the competition.

Figure 2 : The R&D pipeline for cell, gene, and RNA therapies



32% of all candidates in the *cell therapy* pipeline are CAR T-therapies

*Gene therapies* may realize the promise of **precision medicine** across indications

*RNA pipeline* has yet to reflect increased industry interest mRNA vaccine success

Source: IQVIA Pipeline Intelligence September 2021

\*RNA therapies excluding COVID-19 vaccines

## Addressing volatility with new approaches to modeling

Current approaches to advanced analytics need to evolve if companies are to gain a competitive edge, improve margins, and drive growth in today's challenging and volatile environment. There are three key components to successfully implement a data-driven strategy to minimize turbulence:

### 1. Developing a comprehensive needs assessment to inform the strategy

requires re-evaluating the company's existing strategy and cataloging existing data sources and analytics mapped to evolving use cases. Steps in this process include:

- *Confirming the full scope of each use case* and then assessing and cataloging priority key performance indicators to help identify the most appropriate data source to enable predictive analytics
- *Identifying gaps within in-house data* through a data mapping exercise
- *Vetting external data sources* to confirm the fit, maturity, stability, data quality, privacy/security, and value offered by the chosen vendor, and their ability to grow and scale as partners

### 2. Incorporating professional and technology accelerators

to build precision, scale, and efficiencies (Figure 2). Identifying quick, efficient, and cost-effective approaches to accelerate innovation is critical to adjusting to market volatility. When you don't have proper resourcing and technology at the ready, finding the right vendor is essential to ensure all potential benefits are realized. Accelerators may include:

- *Development and maintenance of scalable predictive models to quickly identify, quantify and describe at-risk populations*, enabling informed strategies to drive action.
- *Natural language processing (NLP)* and the *observational medical outcomes partnership (OMOP)* common data model format to develop rapid and scalable models. For insurers, these technology accelerators enhance the processing of unstructured data in electronic medical records, including details that might not be codified on a medical claim. This information can be used for enhancing social determinants of health analytics and to flag

### ABOUT IQVIA INSURER AND RISK SOLUTIONS

IQVIA has supported underwriting and predictive analytics for more than 10 years while transforming data into actionable connected intelligence for more than 60 years. IQVIA's offering focuses on the evolving needs of actuaries and data scientists in accurately assessing and predicting risk to drive better healthcare decisions for patients and for insurers.

We help you manage costs and stay competitive by providing precise details and speed-to-insights regardless of the population you need to assess. You or your stakeholders can make informed pricing, benefit design, or other care management decisions based on IQVIA's unparalleled data, advanced analytics, healthcare expertise, and proven technology.<sup>2</sup>

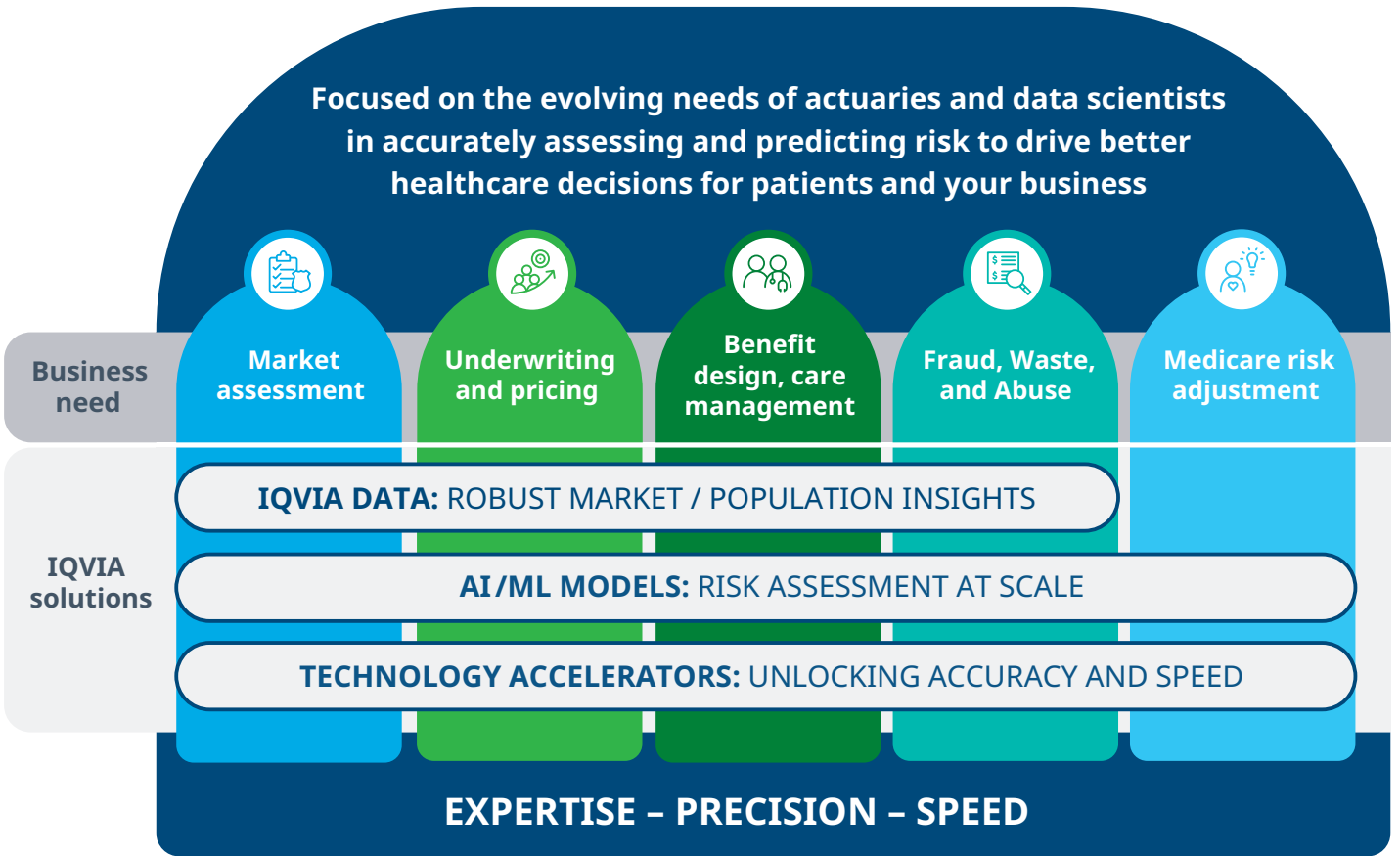
categories of patients that might be at increased risk of receiving a particular diagnosis. NLP can add precision and scale to models by quickly processing millions of documents and records, while OMOP format can consistently codify data from unstructured fields within the EMR. Layering these types of technology accelerators with AI/ML methodologies means greater scale and efficiency can be achieved.

- Professional services to develop a roadmap, drive scale, enhance efficiencies, and enable growth.

### 3. Ensuring availability of support and expertise to implement the strategy and

drive action based on modeling results. Companies should seek a strategic partner that has broad and deep experience and insights, and the ability to connect intelligence in this complex healthcare environment. The right partner should have domain expertise across the healthcare ecosystem with longstanding partnerships and enables success by answering questions and supporting enhancements, offering thought leadership to inspire positive change, and providing professional services to support custom work.

Figure 3 : Applying precision, speed, and expertise to assess and predict risk<sup>2</sup>



## Conclusion: Predictive analytics as a powerful tool to respond to market volatility

Volatility in the U.S. healthcare system is likely to continue for the foreseeable future, driven by factors including high-cost cell and gene therapies with efficacy and impacts that will remain uncertain for many years to come. Against this backdrop, predictive analytics can

help companies to reset their approach and respond to market changes — making more informed decisions based on data-driven insights (*Figure 3*). By becoming educated about the options, stakeholders can take advantage of the vast volumes of external data available today and of novel AI/ML technologies to mine this data and improve their understanding of population-level and individualized risks.

References: 1. IQVIA Institute Report, <https://www.iqvia.com/insights/the-iqvia-institute/reports/the-use-of-medicines-in-the-us-2023>. 2. IQVIA Fact Sheet, <https://www.iqvia.com/-/media/iqvia/pdfs/us/fact-sheet/2022/iqvia-predictive-risk-solutions.pdf>.